

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

4-1-81
5033
p.1
serve
A292.9
5035

Federal - State - Private

SNOW SURVEYS and WATER SUPPLY OUTLOOK for ALASKA



U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
Collaborating with
ALASKA SOIL CONSERVATION DISTRICT

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF
FEB. 1, 1977

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SNOW COURSE MEASUREMENTS BY A SURVEY TEAM IN UTAH'S WASATCH RANGE.
ORC-254-10

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

| STATE | ADDRESS |
|--------------------|---|
| Alaska | Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504 |
| Arizona | Room 3008, 6029 Federal Building, Phoenix, Arizona 85025 |
| Colorado (N. Mex.) | P. O. Box 17107, Denver, Colorado 80217 |
| Idaho | Room 345, 304 N. 8th. St., Boise, Idaho 83702 |
| Montana | P. O. Box 98, Bozeman, Montana 59715 |
| Nevada | P. O. Box 4850, Reno Nevada 89505 |
| Oregon | 1220 S.W. Third Ave., Portland, Oregon 97204 |
| Utah | 4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138 |
| Washington | 360 U.S. Court House, Spokane, Washington 99201 |
| Wyoming | P. O. Box 2440, Casper, Wyoming 82602 |

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



FEDERAL - STATE - PRIVATE

SNOW SURVEYS AND WATER SUPPLY OUTLOOK FOR ALASKA

Issued by

R. M. DAVIS
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D. C.

Released by

WEYMETH E. LONG
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
ANCHORAGE, ALASKA

Report prepared by

GEORGE P. CLAGETT
SNOW SURVEY SUPERVISOR
SOIL CONSERVATION SERVICE
2221 EAST NORTHERN LIGHTS BLVD., RM. 129
ANCHORAGE, ALASKA 99504



SNOWPACK PROFILE STUDY

ALASKA SUMMARY as of FEBRUARY 1, 1977

Snow surveys just completed verify this winter as being most unusual across Alaska. The weather has been warm and wet in coastal regions and mild and dry in the Interior. The winter-long influx of heavily moisture laden and relatively warm storm systems moving north out of the Pacific Ocean have typically dumped tremendous amounts of snow at high elevations, but proportionally far less moisture in the valley bottoms and coastlines. These storms generally beat themselves out in the high coastal mountains leaving the Interior dry in comparison. The snowpack is much denser than normal in many locations indicating the likelihood of an early runoff.

The area by area summary is as follows:

KOYUKUK DRAINAGE

Snow courses along the pipeline between the Yukon Crossing and Atigun Pass are a little above an estimated seven year average. The snowpack is also heavier now than mid-February readings last year.

TANANA-CHENA DRAINAGE

Snow courses in and around the Upper Tanana drainage were measured before the significant storm hit the area January 31st. The courses, at that time, varied from well above normal in the Alaska range to completely bare at some valley bottom locations.

The Chena basin was measured February 3rd after the major storm. Its snowpack now varies between 60 and 80 percent of the average for February 1st. The snowpack was probably on the order of only 30% of normal before. It is currently about 20% above what it was one year ago.

COPEPR DRAINAGE

The high mountains surrounding the Copper River basin have far above normal snowpack. The lower elevation courses indicate a near normal to below normal snowpack at this time depending where snowmelt has occurred. All locations except near the major drainageways are well ahead of the snowpack measured at this time last year.

SUSITNA DRAINAGE

The Upper Susitna is similar to the Copper Drainage - heavy snowpack in the surrounding mountains to slightly above normal within the basin itself.

The Lower Susitna Valley has a very heavy and dense snowpack. Several snow courses are exceeded only by the snowpack of 1972, for February 1st, in the last fourteen years. The Peters Hills site is a new maximum of record. All sites are far in excess of amounts recorded one year ago.

UPPER COOK INLET DRAINAGE

The Ship Creek snowpack is the heaviest for February 1st since records began ten years ago. Indian Pass snow course, at 2350 feet elevation, is 80% above its average. Higher elevations are likely even heavier percentage wise. The precipitation can at the Ship Creek site has caught 16.6 inches of moisture since October 1st. This is 250 percent of normal. The snow course, however, has only 8.4 inches of snow water and is in a springtime melt condition. Low elevation courses are way below normal and nearly bare due to warm temperatures. Snowmelt runoff will be very heavy and probably earlier than usual.

KENAI PENINSULA DRAINAGES

The Kenai Peninsula also has an extremely heavy snowpack at high elevations; at the same time the ground is bare at lower elevations. The Kenai Summit snow course along the Seward Highway is better than 200 percent of its short-term, seven year average. The heavy snowpack at Turnagain Pass is in a state of slush clear to the ground. Streamflow here is also expected to be heavy and early.

SOUTHEASTERN DRAINAGES

No data has been received from Southeast. It is only known that a snowpack is non-existent at low elevations due to the unseasonably warm temperatures.

STREAMFLOW FORECASTS

| STREAMFLOW FORECASTS | | THIS YEAR | | PAST RECORD | |
|--|--------------------|--------------------|-----------------|--------------------|-----------|
| BASIN, STREAM and/or FORECAST POINT | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average † |
| NO FORECASTS MADE BEFORE MARCH 1, 1977 | | | | | |

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | | | THIS YEAR | | | PAST RECORD | | |
|---|--------|-----------|-------------------|------------------------|------------------------------|------------------------|-----------|--------------------------------|
| | | | Date of Survey | Snow Depth (Inches) | Water Content (Inches) | Water Content (inches) | | Years of Previous Record |
| NAME | Number | Elevation | | | | Last Year | Average † | |
| AS OF JAN. 15, 1977 | | | | | | | | |
| <u>TANANA-CHENA:</u> | | | | | | | | |
| Caribou Mine | 55 | 1115 | 1/14 | 9a | 1.8e | 1.7e | 3.4 | 8 |
| Cleary Summit | 64 | 2230 | 1/14 | 6a | 1.3e | 2.4e | 4.1 | 8 |
| Little Chena | 62 | 2200 | 1/14 | 7a | 1.5e | 2.8e | 3.8 | 8 |
| Lower Chena | 59 | 2000 | 1/14 | 14a | 2.7e | --- | --- | 0 |
| Mt. Ryan | 61 | 2950 | 1/14 | 11a | 2.2e | 1.9e | 4.1 | 9 |
| Munson Ridge | 56 | 3100 | 1/14 | 15a | 2.7e | 3.8e | 5.7 | 8 |
| Teuchet Creek | 57 | 1640 | N O | S U R V E Y | --- | --- | --- | 0 |
| Upper Chena | 58 | 3000 | 1/14 | 19a | 3.6e | 2.8e | 4.7 | 8 |
| AS OF FEB. 1, 1977 | | | | | | | | |
| <u>TANANA-CHENA:</u> | | | | | | | | |
| Big Delta | 52 | 980 | 1/25 | 3 | .4 | 1.8 | 2.6 | 6 |
| Bonanza Creek | 66 | 1150 | DELAYED REPORT | | | 1.8 | 4.0 | 5 |
| Caribou Creek | 68 | 1440 | 2/3 | 22 | 3.1 | 3.4 | 4.4 | 7 |
| Caribou Mine | 55 | 1115 | N O | S U R V E Y | --- | 3.0 | 5.1 | 9 |
| Cleary Summit | 64 | 2230 | 2/3 | 28 | 4.9 | 4.5 | 6.1 | 9 |
| Colorado Creek | 63 | 750 | 2/3 | 20 | 2.8 | 2.3 | 4.2 | 11 |
| Fielding Lake | 49 | 3000 | 1/26 | 45 | 10.2 | 4.5 | 7.9 | 5 |
| Ft. Greely | 50 | 1420 | 1/26 | 0 | 0.0 | 1.7 | 2.7 | 10 |
| French Creek | 53 | 2010 | 1/25 | 6 | 1.6 | 2.6 | 4.7 | 8 |
| Granite Creek | 51 | 1240 | 1/27 | 8 | 1.4 | 1.3 | 2.6 | 9 |
| Haystack Mountain | 67 | 1950 | 2/3 | 28 | 4.1 | 4.7 | 6.5 | 7 |
| Little Chena | 62 | 2200 | 2/3 | 26 | 4.8 | 3.6 | 6.0 | 7 |
| Little Salcha | 54 | 1500 | 1/25 | 5 | 1.0 | 2.5 | 4.0 | 8 |
| Lower Chena | 59 | 2000 | N O | S U R V E Y | --- | --- | --- | 0 |
| Mentasta Pass | 47 | 2430 | 1/26 | 29 | 5.7 | 2.3 | 4.9 | 5 |
| Monument Creek | 60 | 1900 | N O | S U R V E Y | --- | 3.6 | 4.0 | 3 |
| Mt. Ryan | 61 | 2950 | 2/3 | 32 | 5.2 | 4.4 | 7.8 | 7 |
| Munson Ridge | 56 | 3100 | 2/3 | 31 | 5.5 | 8.6 | 10.0 | 9 |
| Poker Creek | 69 | 1025 | 2/3 | 22 | 3.1 | 3.2 | 4.1 | 7 |
| Teuchet Creek | 57 | 1640 | N O | S U R V E Y | --- | 2.1 | 3.0 | 4 |
| Tok Junction | 46 | 1650 | 1/27 | 14 | 2.5 | 1.9 | 2.6 | 5 |
| Upper Chena | 58 | 3000 | N O | S U R V E Y | --- | N/S | 8.8 | 6 |
| Yak Pasture | 65 | 540 | 2/3 | 22 | 3.7 | 2.1 | 3.5 | 8 |
| a - aerial marker reading e-estimated N/S - No Survey | | | | | | | | |

† 1958-1972 period.

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | | | THIS YEAR | | | PAST RECORD | | |
|---|--------|-----------|-----------------|---------------------|------------------------|------------------------|-----------|--------------------------|
| | | | Date of Survey | Snow Depth (Inches) | Water Content (Inches) | Water Content (inches) | | Years of Previous Record |
| NAME | Number | Elevation | | | | Last Year | Average † | |
| COPPER RIVER: | | | | | | | | |
| Haggard Creek | 48 | 2540 | 1/26 | 32 | 7.3 | 1.3 | 3.9 | 10 |
| Little Nelchina | 31 | 4160 | 2/2 | 27a | 5.1e | 3.0e | 3.5 | 8 |
| Mankomen Lake | 45 | 3050 | DELAYED REPORT | | | 2.1 | 4.8 | 10 |
| St. Anne's Lake | 28 | 1990 | 2/2 | 16 | 3.4 | 3.8 | 3.6 | 11 |
| Sanford River | 27 | 2280 | 2/2 | 10a | 2.5e | 2.9 | 3.6 | 10 |
| MATANUSKA-SUSITNA: | | | | | | | | |
| Alexander Lake | 18 | 200 | 2/2 | 50a | 11.5e | 5.6 | 7.5 | 12 |
| Bald Mountain Lake | 23 | 2150 | 2/3 | 45a | 9.0e | 2.7e | 3.9 | 11 |
| Chelatna Lake | 20 | 1650 | 2/2 | 28a | 7.3e | 7.6e | 6.7 | 12 |
| Clearwater Lake | 26 | 3100 | 2/3 | 18a | 3.4e | 2.0e | 3.9 | 11 |
| Devils Canyon | 121 | 1350 | 2/3 | 36a | 6.7e | --- | --- | 0 |
| Fog Lakes #2 | 24 | 2250 | 2/3 | 28 | 5.6 | 2.1 | 4.4 | 7 |
| Lake Louise | 29 | 2400 | 2/2 | 18 | 3.1 | 1.7 | 2.9 | 11 |
| Monahan Flat | 25 | 2710 | 2/3 | 30a | 6.0e | 3.7e | 5.0 | 11 |
| Oshetna Lake | 30 | 2950 | 2/2 | 17 | 2.9 | 2.0 | 2.7 | 12 |
| Peters Hills | 21 | 2010 | 2/2 | 66a | 15.8e | 9.4e | 9.7 | 9 |
| Skwentna | 19 | 160 | 2/2 | 45 | 10.7 | 5.4 | 6.7 | 10 |
| Talkeetna | 22 | 350 | 2/2 | 23 | 6.7 | 4.3 | 5.7 | 10 |
| Willow Airstrip | 32 | 150 | 2/2 | 20 | 6.4 | 3.2 | 5.0 | 12 |
| UPPER COOK INLET: | | | | | | | | |
| Arctic Ski Bowl | 5 | 3000 | 2/1 | 31 | 10.5 | 5.1 | 8.2 | 11 |
| Arctic Valley #1 | 1 | 500 | 2/1 | 1 | .2 | 1.3 | 2.6 | 11 |
| Arctic Valley #2 | 2 | 1000 | 2/1 | 3 | 1.0 | 1.5 | 2.7 | 11 |
| Arctic Valley #3 | 3 | 2030 | 2/1 | 22 | 5.7 | 3.1 | 4.3 | 11 |
| Arctic Valley #4 | 4 | 2330 | 2/1 | 24 | 6.5 | 3.0 | 4.8 | 11 |
| Bird Creek | 8 | 2350 | 1/30 | 41 | 14.2 | 10.7 | 10.0 | 10 |
| Indian Pass | 7 | 2350 | 1/30 | 70 | 23.8 | 14.3 | 13.2 | 10 |
| McArthur | 17 | 120 | NO SURVEY | | | 10.6e | 11.7 | 12 |
| Ship Creek | 6 | 1750 | 1/30 | 28 | 8.4 | 6.6 | 6.6 | 10 |
| Mt. Alyeska | 10 | 1200 | 1/29 | 104 | 38.0 | 23.4 | 19.6 | 4 |
| South Campbell Creek | 9 | 1200 | 1/30 | 14 | 4.4 | N/S | 5.3 | 3 |
| KENAI PENINSULA: | | | | | | | | |
| Bertha Creek | 11 | 850 | 2/1 | 46 | 17.0 | 9.9 | 8.6 | 7 |
| Bridge Creek, Lower | 16 | 1100 | 1/31 | 32 | 11.8 | 5.6 | 6.4 | 4 |
| Bridge Creek, Upper | 15 | 1300 | 1/31 | 33 | 11.2 | 6.0 | 6.7 | 4 |
| Jean Lake | 14 | 620 | 2/1 | 8 | 3.1 | 2.1 | 2.9 | 7 |
| Kenai Summit | 12 | 1390 | 2/1 | 47 | 15.4 | 6.6 | 7.4 | 7 |
| Moose Pass | 13 | 700 | 2/1 | 0 | 0.0 | 3.3 | 3.5 | 7 |
| SOUTHEAST: | | | | | | | | |
| Harriet Top | 102 | 2000 | | | | 40.8 | 37.3 | 4 |
| Hunt Saddle | 103 | 1500 | | | | 25.9 | 29.4 | 4 |
| Lake Shore | 104 | 660 | | | | 9.3 | 16.2 | 4 |
| Cropley Lake | 94 | 1650 | DELAYED REPORTS | | | --- | --- | 0 |
| Eagle Crest | 95 | 1000 | | | | --- | --- | 0 |
| Fish Creek | 96 | 500 | | | | --- | --- | 0 |
| Crystal Lake | 101 | 1375 | | | | --- | --- | 0 |
| Petersburg Reservoir | 99 | 550 | | | | --- | --- | 0 |
| Mitkof Island | 100 | 1050 | | | | --- | --- | 0 |
| a - aerial marker reading e - estimated N/S - No Survey | | | | | | | | |

† 1958-1972 period.

SNOW

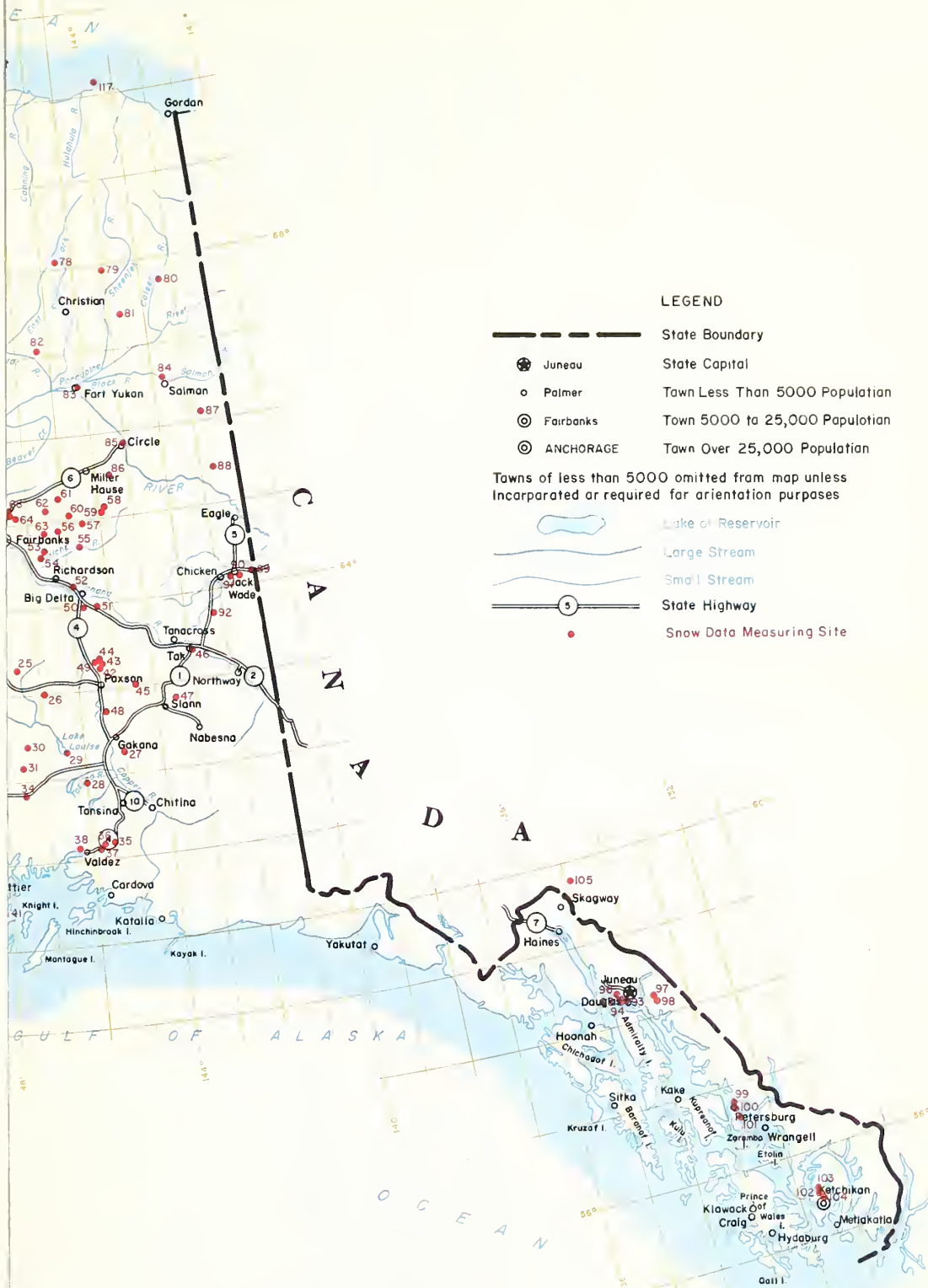
| DRAINAGE BASIN and/or SNOW COURSE | | | THIS YEAR | | | PAST RECORD | | |
|---|--------|-----------|---------------------------|---------------------|------------------------|------------------------|--------------------|--------------------------|
| | | | Date of Survey | Snow Depth (Inches) | Water Content (Inches) | Water Content (inches) | | Years of Previous Record |
| | | | | | | Last Year | Average + | |
| NAME | Number | Elevation | | | | | | |
| <u>KOYUKUK:</u> | | | | | | | | |
| Coldfoot Camp | 109 | 1000 | 1/26 | 25 | 4.4 | N/S | N/S | 1 |
| Dietrich Camp | 110 | 1550 | 1/26 | 23 | 4.0 | N/S | N/S | 1 |
| Five Mile Camp | 106 | 400 | 1/26 | 25 | 6.5 | N/S | N/S | 1 |
| Prospect Creek | 108 | 980 | 1/26 | 25 | 6.0 | N/S | N/S | 1 |
| Table Mountain | 111 | 2200 | 1/26 | 24 | 4.0 | N/S | N/S | 1 |
| Thirty Mile | 107 | 1300 | 1/26 | 31 | 8.0 | N/S | N/S | 1 |
| <u>NORTH SLOPE:</u> | | | | | INCREMENT | | | |
| * "Wyoming" Precipitation Gages | | | DATE | | SINCE LAST READING | | ACCUMULATIVE TOTAL | |
| Barrow | 115 | 15 | 9/20 | | .9 | | | |
| | | | 10/20 | | .6 | | .6 | |
| | | | 11/23 | | 1.1 | | 1.7 | |
| | | | 12/23 | | .4 | | 2.1 | |
| | | | 1/22 | | 1.0 | | 3.1 | |
| Barter Island | 117 | 15 | 10/4 | | 1.2 | | | |
| | | | 11/6 | | 1.2 | | 1.2 | |
| | | | 11/22 | | .2 | | 1.4 | |
| | | | 12/21 | | 1.6 | | 3.0 | |
| Candle | 119 | 20 | D E L A Y E D R E P O R T | | | | | |
| Kavik River | 118 | 200 | 11/4 | | .8 | | .8 | |
| | | | 11/26 | | .1 | | .9 | |
| | | | 12/27 | | 1.0 | | 1.9 | |
| Kugruk River | 120 | 225 | 12/30 | | 2.6 | | 2.6 | |
| Jago River | 122 | | 11/7 | | 1.3 | | 1.3 | |
| | | | 11/22 | | .4 | | 1.7 | |
| | | | 12/21 | | 1.2 | | 2.9 | |
| Meade River | 116 | 200 | 9/20 | | .7 | | | |
| | | | 10/21 | | 1.0 | | 1.0 | |
| | | | 11/23 | | .2 | | 1.2 | |
| | | | 12/23 | | .4 | | 1.6 | |
| | | | 1/21 | | 1.4 | | 3.0 | |
| Point Hope | 123 | 20 | D E L A Y E D R E P O R T | | | | | |
| Prudhoe Bay | 114 | 30 | 11/7 | | 1.3 | | 1.3 | |
| | | | 11/23 | | .3 | | 1.6 | |
| | | | 12/27 | | .8 | | 2.4 | |
| Sagwon | 113 | 1000 | 1/26 | | 1.6 | | 1.6 | |
| Toolik River | 112 | 3100 | 11/11 | | 1.6 | | 1.6 | |
| | | | 1/26 | | 1.4 | | 3.0 | |
| a - aerial marker reading e - estimated N/S - No Survey | | | | | | | | |

+ 1958-1972 period.

* The Wyoming Gage is a new device for accurately collecting rain and snowfall in windy unprotected areas. It was developed during the period 1969 through 1974 near Laramie, Wyoming, by the University of Wyoming and the United States Forest Service Forest and Range Experiment Station. The study area was a barren, wind swept ridge, similar to Alaska's tundra. During this period the new design consistently caught \pm 10 percent of the "control" gages located in protected areas nearby.

The basic configuration of the gage has two concentric rings of snow fences surrounding the orifice of the precipitation storage can. The 4 foot snow fence "mesh" is rigidly attached to a solid framework. The outer circle is ten feet off the ground and 20 feet in diameter; the inner circle is 8 feet off the ground and 10 feet in diameter. The level of the storage can orifice is 7 feet above the ground surface. A precipitation gage of any standard design, whether recording or non-recording can be used.

The Wyoming gage "works" during howling snow storms by creating a slight vacuum area within the fencing material which pulls down into the storage can the snow particles which might be traveling more nearly horizontal than vertical. Without the windscreen, the precipitation gage would collect only a small percent of falling snow during windy periods. During blowing snow conditions between storms, almost all of the moving material is passed beneath the gage.



SNOW COURSES AND RELATED DATA MEASURING SITES

ALASKA

1977

20 0 20 40

SCALE 1:2,500,000
ALBERS EQUAL AREA PROJECTION



USDA EGS PORTLAND, OR 1976 M7-EN-22020



| MAP NO. | COURSE NAME | LAT. | LONG. | MEAS. DATES * | MEAS. * BY |
|---------|-----------------------|------------------------------------|----------|---------------|---------------|
| 1 | Arctic Valley #1 | 67°30'N | 148°30'W | 3,4 | a |
| 2 | Arctic Valley #2 | 67°33'N | 148°15'W | 3,4 | a |
| 3 | Arctic Valley #3 | 68°05'N | 145°35'W | 3,4 | a |
| 4 | Arctic Valley #4 | 67°55'N | 144°08'W | 3,4 | a |
| 5 | Arctic Ski Bowl | 67°44'N | 142°28'W | 3,4,7 | a |
| 6 | Ship Creek | 67°23'N | 143°45'W | 3,4 | a |
| 7 | Indian Pass | 67°03'N | 146°25'W | 3,4,7 | a |
| 8 | Bird Creek | 66°35'N | 145°15'W | 3,4,7 | a |
| 9 | South Campbell Creek | 66°36'N | 142°45'W | 3,4,7 | a |
| 10 | Mt. Alyeska | 65°50'N | 144°05'W | 3,4,7 | a |
| 11 | Bertha Creek | 65°29'N | 144°39'W | 3,4 | a |
| 12 | Kenai Summit | 66°06'N | 141°48'W | 3,4 | a |
| 13 | Moose Pass | 65°25'N | 141°40'W | 3,4 | a |
| 14 | Jean Lake | 64°08'N | 141°08'W | 3,4,7 | a |
| 15 | Bridge Creek (UP) | 64°05'N | 141°27'W | 3,4 | a |
| 16 | Bridge Creek (LO) | 64°05'N | 141°45'W | 3,4,7 | a |
| 17 | McArthur | 63°42'N | 142°17'W | 3,4,5 | a |
| 18 | Alexander Lake | 58°16'N | 134°27'W | 3,4,5 | b |
| 19 | Skwentna | 58°16'N | 134°31'W | 1,2,3,4 | b |
| 20 | Chelatna Lake | 58°17'N | 134°32'W | 1,2,3,4 | b |
| 21 | Peters Hills | 58°19'N | 134°33'W | 1,2,3,4 | b |
| 22 | Talkeetna | 58°11'N | 133°53'W | 3,4,5,6,7 | e |
| 23 | Bald Mtn. Lake | 58°09'N | 133°43'W | 3,4,5,6,7 | e |
| 24 | Fog Lakes | 56°47'N | 132°56'W | 2,3,4,5 | b |
| 25 | Monahan Flat | 56°46'N | 132°56'W | 2,3,4,5 | b |
| 26 | Clearwater Lake | 56°36'N | 132°50'W | 2,3,4,5 | b |
| 27 | Sanford River | 55°29'N | 131°37'W | 3,4,5 | b |
| 28 | St. Anne's Lake | 55°30'N | 131°37'W | 3,4,5 | b |
| 29 | Lake Louise | 55°29'N | 131°36'W | 3,4,5 | b |
| 30 | Oshetna Lake | 59°45'N | 134°58'W | 3,4,5 | e |
| 31 | Little Nelchina | 65°55'N | 149°48'W | 2,3,4,5 | i |
| 32 | Willow Airstrip | 66°13'N | 150°15'W | 2,3,4,5 | i |
| 33 | Independence Mine | 66°47'N | 150°45'W | 2,3,4,5 | i |
| 34 | Sheep Mountain | 67°16'N | 150°10'W | 1,2,3,4 | i |
| 35 | Tsaina River | 67°42'N | 149°45'W | 2,3,4,5 | i |
| 36 | Worthington Glacier | 67°58'N | 149°45'W | 2,3,4,5 | i |
| 37 | Lowe River | 68°37'N | 149°26'W | 7 | d |
| 38 | Valdez | 69°26'N | 148°34'W | 7 | d |
| 39 | Wolverine Glacier (A) | 70°15'N | 148°30'W | 7 | h |
| 40 | Wolverine Glacier (B) | 71°20'N | 156°40'W | 7 | h |
| 41 | Wolverine Glacier C | 70°29'N | 157°25'W | 7 | h |
| 42 | Gulkana Glacier A | 70°08'N | 143°37'W | 7 | h |
| 43 | Gulkana Glacier B | 69°30'N | 147°00'W | 7 | h |
| 44 | Gulkana Glacier C | 66°55'N | 161°56'W | 3,4 | a,f |
| 45 | Mankomen Lake | 65°40'N | 162°27'W | 3,4 | a,f |
| 46 | Tok Junction | | | | |
| 47 | Mentasta Pass | | | | |
| 48 | Haggard Creek | | | | |
| 49 | Fielding Lake | | | | |
| 50 | Ft. Greely | | | | |
| 51 | Granite Creek | | | | |
| 52 | Big Delta | | | | |
| 53 | French Creek | | | | |
| 54 | Little Salcha | | | | |
| 55 | Caribou Mine | | | | |
| 56 | Munson Ridge | | | | |
| 57 | Teuchet Creek | | | | |
| 58 | Upper Chena | y 1, February 1, March 1, April 1, | | | |
| 59 | Lower Chena | | | | |
| 60 | Monument Creek | | | | |
| 61 | Mt. Ryan | snow survey, as follows: | | | |
| 62 | Little Chena | | | | |
| 63 | Colorado Creek | | | | |
| 64 | Cleary Summit | Engineering Lab | | | |
| 65 | Yak Pasture | | | | |
| 66 | Bonanza Creek | | | | |
| 67 | Haystack Mtn. | | | | |
| 68 | Caribou Creek | | | | |
| 69 | Poker Creek | | | | |
| 70 | Farewell Lake | | | | |
| 71 | Lake Minchumina | | | | |
| 72 | Wien Lake | er to: | | | |
| 73 | Lake Todatonten | er | | | |
| 74 | Bettles Field | | | | |
| 75 | Anaktuvuk Pass | | | | |

AGENCIES AND ORGANIZATIONS COOPERATING IN ALASKA SNOW SURVEYS

FEDERAL

Department of Agriculture

Forest Service

Institute of Northern Forestry

North Tongass National Forest

South Tongass National Forest

Chugach National Forest

Department of Commerce

National Oceanic and Atmospheric Administration

NOAA National Weather Service

Department of Defense

U.S. Army Corps of Engineers

U.S. Army Cold Regions Research and Engineering Laboratory

Department of Interior

Bureau of Land Management

Geological Survey

Alaska Power Administration

STATE

Alaska Department of Fish and Game

Alaska Department of Highways

Alaska Department of Natural Resources, Division of Parks

Alaska Soil Conservation District

Fairbanks Soil Conservation Sub-district

Homer Soil Conservation Sub-district

Kenai-Kasilof Soil Conservation Sub-district

Kenny Lake Soil Conservation Sub-district

Kodiak Soil Conservation Sub-district

Montana Soil Conservation Sub-district

Palmer Soil Conservation Sub-district

Salcha-Big Delta Soil Conservation Sub-district

Wasilla Soil Conservation Sub-district

University of Alaska

MUNICIPALITIES

Municipality of Anchorage

PRIVATE

Mt. Alyeska Resort, Inc.

INDEX OF ALASKA SNOW COURSES

| MAP NO. | COURSE NAME | COURSE NO. * | ELEV. | LAT. | LONG. | MEAS. DATES * | MEAS. BY * | MAP NO. | COURSE NAME | COURSE NO. * | ELEV. | LAT. | LONG. | MEAS. DATES * | MEAS. BY * |
|---------|-----------------------|--------------|-------|---------|----------|---------------|------------|---------|----------------------|--------------|-------|---------|----------|---------------|------------|
| 1 | Arctic Valley #1 | 49MM1 | 500 | 61°13'N | 149°40'W | 2,3,4,5 | c | 76 | Chandalar Lake | 48SS1A | 2040 | 67°30'N | 148°30'W | 3,4 | a |
| 2 | Arctic Valley #2 | 49MM2 | 1000 | 61°13'N | 149°37'W | 2,3,4,5 | c | 77 | Squaw Lake | 48SS2a | 2150 | 67°33'N | 148°15'W | 3,4 | a |
| 3 | Arctic Valley #3 | 49MM3 | 2030 | 61°14'N | 149°35'W | 2,3,4,5 | c | 78 | Arctic Village | 45TT1A | 2300 | 68°05'N | 145°35'W | 3,4 | a |
| 4 | Arctic Valley #4 | 49MM4 | 2330 | 61°14'N | 149°33'W | 2,3,4,5 | c | 79 | Koness Lake | 44SS1A | 1790 | 67°55'N | 144°08'W | 3,4 | a |
| 5 | Arctic Ski Bowl | 49MM5 | 3000 | 61°15'N | 149°31'W | 2,3,4,5 | c | 80 | Coleen River | 42SS1A | 1100 | 67°44'N | 142°28'W | 3,4,7 | a |
| 6 | Ship Creek | 49MM7MPS | 1750 | 61°08'N | 149°28'W | 2,3,4,5 | a | 81 | Vundik Lake | 43SS1a | 950 | 67°23'N | 143°45'W | 3,4 | a |
| 7 | Indian Pass | 49MM8A | 2350 | 61°05'N | 149°29'W | 2,3,4,5 | a | 82 | Venetie | 46SS1A | 610 | 67°03'N | 146°25'W | 3,4,7 | a |
| 8 | Bird Creek | 49MM6A | 2350 | 61°06'N | 149°20'W | 2,3,4,5,7 | a | 83 | Fort Yukon | 45RR1AM | 430 | 66°35'N | 145°15'W | 3,4,7 | a |
| 9 | South Campbell Creek | 49MM11 | 1200 | 61°08'N | 149°42'W | 2,3,4,5 | a | 84 | Black River | 42RR1A | 650 | 66°36'N | 142°45'W | 3,4,7 | a |
| 10 | Mt. Alyeaka | 49LL15S | 1200 | 60°57'N | 149°05'W | 2,3,4,5 | a,b | 85 | Circle City | 44QQ3A | 600 | 65°50'N | 144°05'W | 3,4,7 | a |
| 11 | Bertha Creek | 49LL2 | 850 | 60°45'N | 149°51'W | 2,3,4,5 | a | 86 | Circle Hot Springs | 44QQ5 | 860 | 65°29'N | 144°39'W | 3,4 | a |
| 12 | Kenai Summit | 49LL3 | 1390 | 60°40'N | 149°28'W | 2,3,4,5 | a | 87 | Dempsey Creek | 41RR2A | 950 | 66°06'N | 141°48'W | 3,4 | a |
| 13 | Moose Pasa | 49LL4 | 700 | 60°31'N | 149°30'W | 2,3,4,5 | a | 88 | Nation River | 41QQ1a | 3050 | 65°25'N | 141°40'W | 3,4 | a |
| 14 | Jean Lake | 50LL1 | 620 | 60°31'N | 150°11'W | 2,3,4,5 | a | 89 | Eagle Village | 41PP1A | 900 | 64°08'N | 141°08'W | 3,4,7 | a |
| 15 | Bridge Creek (UP) | 51KK1 | 1300 | 59°42'N | 151°28'W | 3,4,5 | a | 90 | Boundary | 41PP3A | 3300 | 64°05'N | 141°27'W | 3,4 | a |
| 16 | Bridge Creek (LO) | 51KK2 | 1100 | 59°40'N | 151°32'W | 3,4,5 | a | 91 | Chicken Airstrip | 41PP2A | 1650 | 64°05'N | 141°45'W | 3,4,7 | a |
| 17 | McArthur | 52LL1A | 120 | 61°00'N | 152°00'W | 2,3,4,5 | a,c | 92 | Mt. Fairplay | 42001a | 3100 | 63°42'N | 142°17'W | 3,4,5 | a |
| 18 | Alexander Lake | 50M1A | 200 | 61°45'N | 150°54'W | 2,3,4,5 | a,c | 93 | Douglas Ski Bowl | 34JJ1 | 1640 | 58°16'N | 134°27'W | 3,4,5 | b |
| 19 | Skwentna | 51M1A | 160 | 61°58'N | 151°12'W | 2,3,4,5 | a,c | 94 | Cropley Lake | 34JJ2 | 1650 | 58°16'N | 134°31'W | 1,2,3,4 | b |
| 20 | Chelatna Lake | 51NN1a | 1650 | 62°31'N | 151°29'W | 2,3,4,5 | a,c | 95 | Eagle Crest | 34JJ3 | 1000 | 58°17'N | 134°32'W | 1,2,3,4 | b |
| 21 | Peters Hills | 50NN1a | 2010 | 62°31'N | 150°57'W | 2,3,4,5 | a,c | 96 | Fish Creek | 34JJ4 | 500 | 58°19'N | 134°33'W | 1,2,3,4 | b |
| 22 | Talkeetna | 50NN2 | 350 | 62°18'N | 150°05'W | 2,3,4,5 | a,c | 97 | Upper Long Lake | 33JJ2aS | 1000 | 58°11'N | 133°53'W | 3,4,5,6,7 | e |
| 23 | Bald Mtn. Lake | 49NN1A | 2150 | 62°15'N | 149°45'W | 2,3,4,5 | a,c | 98 | Speel River | 33JJ3A | 280 | 58°09'N | 133°43'W | 3,4,5,6,7 | e |
| 24 | Fog Lakes | 48NN2A | 2250 | 62°47'N | 148°29'W | 2,3,4,5 | a,c | 99 | Petersburg Reservoir | 32HH1 | 550 | 56°47'N | 132°56'W | 2,3,4,5 | b |
| 25 | Monahan Flat | 47001A | 2710 | 63°18'N | 147°39'W | 2,3,4,5 | a,c | 100 | Mitkof Island | 32HH2 | 1050 | 56°46'N | 132°56'W | 2,3,4,5 | b |
| 26 | Clearwater Lake | 46NN1A | 3100 | 62°59'N | 146°58'W | 2,3,4,5 | a,c | 101 | Crystal Lake | 32HH3 | 1375 | 56°36'N | 132°50'W | 2,3,4,5 | b |
| 27 | Sanford River | 45NN2A | 2280 | 62°13'N | 145°04'W | 2,3,4,5 | a,c | 102 | Harriet Top | 31GG1 | 2000 | 55°29'N | 131°37'W | 3,4,5 | b |
| 28 | St. Anne's Lake | 46MM1A | 1990 | 61°53'N | 146°03'W | 2,3,4,5 | a,c | 103 | Hunt Saddle | 31CC2 | 1500 | 55°30'N | 131°37'W | 3,4,5 | b |
| 29 | Lake Louise | 46NN2A | 2400 | 62°17'N | 146°30'W | 2,3,4,5 | a,c | 104 | Lake Shore | 31CC3 | 660 | 55°29'N | 131°36'W | 3,4,5 | b |
| 30 | Oshetna Lake | 47NN1A | 2950 | 62°23'N | 147°29'W | 2,3,4,5 | a,c | 105 | Log Cabin (B.C.) | 34KK1 | 2880 | 59°45'N | 134°58'W | 3,4,5 | e |
| 31 | Little Nelchina | 47NN2a | 4160 | 62°07'N | 147°36'W | 2,3,4,5 | a,c | 106 | Five Mile Camp | 49RR1 | 400 | 65°55'N | 149°48'W | 2,3,4,5 | i |
| 32 | Willow Airstrip | 50MM2 | 150 | 61°45'N | 150°03'W | 2,3,4,5 | a,c | 107 | Thirty Mile | 50RR2a | 1300 | 66°13'N | 150°15'W | 2,3,4,5 | i |
| 33 | Independence Mine | 49MM10 | 3300 | 61°45'N | 149°25'W | 3,4,5 | a | 108 | Prospect Creek | 50RR1 | 980 | 66°47'N | 150°45'W | 2,3,4,5 | i |
| 34 | Sheep Mountain | 47MM2 | 2900 | 61°47'N | 147°30'W | 3,4,5 | a | 109 | Cold Foot Camp | 50SS1 | 1000 | 67°16'N | 150°10'W | 1,2,3,4 | i |
| 35 | Tsaina River | 45MM4 | 1500 | 61°12'N | 145°30'W | 3,4,5 | a | 110 | Dietrich Camp | 49SS1A | 1550 | 67°42'N | 149°45'W | 2,3,4,5 | i |
| 36 | Worthington Glacier | 45MM2 | 2400 | 61°10'N | 145°45'W | 3,4,5 | a | 111 | Table Mountain | 49SS3a | 2200 | 67°58'N | 149°45'W | 2,3,4,5 | i |
| 37 | Lowe River | 45MM3 | 550 | 61°06'N | 145°50'W | 3,4,5 | a | 112 | Toolik River | 49TT1 | 3100 | 68°37'N | 149°26'W | 7 | d |
| 38 | Valdez | 46MM2 | 50 | 61°08'N | 146°20'W | 2,3,4,5 | a | 113 | Sagwon | 48UU1 | 1000 | 69°26'N | 148°34'W | 7 | d |
| 39 | Wolverine Glacier (A) | 48LL1 | 2130 | 60°23'N | 148°54'W | 1,2,4,5,6,7 | g | 114 | Prudhoe Bay | 48VV1 | 30 | 70°15'N | 148°30'W | 7 | h |
| 40 | Wolverine Glacier (B) | 48LL2 | 3610 | 60°25'N | 148°55'W | 2,3,4,5,6,7 | g | 115 | Barrow | 56WW1 | 15 | 71°20'N | 156°40'W | 7 | h |
| 41 | Wolverine Glacier C | 48LL3 | 4430 | 60°25'N | 148°55'W | 1,2,4,6,7 | g | 116 | Meade River | 57VV1 | 200 | 70°29'N | 157°25'W | 7 | h |
| 42 | Culkana Glacier A | 45006 | 4590 | 63°15'N | 145°29'W | 2,3,4,5,6,7 | g | 117 | Barter Island | 43VV1 | 15 | 70°08'N | 143°37'W | 7 | h |
| 43 | Culkana Glacier B | 45007 | 5480 | 63°17'N | 145°26'W | 2,3,4,5,6,7 | g | 118 | Kavik River | 47UU1 | 200 | 69°30'N | 147°00'W | 7 | h |
| 44 | Culkana Glacier C | 45008 | 6360 | 63°19'N | 145°29'W | 5,6,7 | g | 119 | Candle | 61QQ1 | 20 | 66°55'N | 161°56'W | 3,4 | a,f |
| 45 | Mankomen Lake | 44NN1 | 3050 | 63°00'N | 144°32'W | 2,3,4,5 | a | 120 | Kugruk River | 62QQ1 | 225 | 65°40'N | 162°27'W | 3,4 | a,f |
| 46 | Tok Junction | 43001 | 1650 | 63°18'N | 143°00'W | 2,3,4,5 | a | | | | | | | | |
| 47 | Mentasta Pass | 43NN1 | 2430 | 62°51'N | 143°30'W | 2,3,4,5 | a | | | | | | | | |
| 48 | Haggard Creek | 45NN1A | 2540 | 62°42'N | 145°28'W | 2,3,4,5 | a | | | | | | | | |
| 49 | Fielding Lake | 45001A | 3000 | 63°18'N | 145°33'W | 2,3,4,5 | a | | | | | | | | |
| 50 | Ft. Creely | 45005 | 1420 | 63°57'N | 145°45'W | 1,2,3,4,5,7 | a | | | | | | | | |
| 51 | Granite Creek | 45004 | 1240 | 63°57'N | 145°24'W | 1,2,3,4,5,7 | a | | | | | | | | |
| 52 | Big Delta | 45PP1 | 980 | 64°14'N | 145°58'W | 2,3,4,5 | a | | | | | | | | |
| 53 | French Creek | 46PP2MA | 2010 | 64°43'N | 146°40'W | 2,3,4,5,7 | a | | | | | | | | |
| 54 | Little Salcha | 46PP3 | 1500 | 64°38'N | 146°44'W | 2,3,4,5,7 | a | | | | | | | | |
| 55 | Caribou Mine | 45PP2A | 1115 | 64°40'N | 145°40'W | 2,3,4,5,7 | a | | | | | | | | |
| 56 | Munson Ridge | 46PP1AP | 3100 | 64°52'N | 146°13'W | 2,3,4,5,7 | a | | | | | | | | |
| 57 | Teuchet Creek | 45PP3 | 1640 | 64°57'N | 145°31'W | 2,3,4,5 | a | | | | | | | | |
| 58 | Upper Chena | 44QQ1AP | 3000 | 65°07'N | 144°55'W | 2,3,4,5,7 | a | | | | | | | | |
| 59 | Lower Chena | 44QQ6 | 2000 | 65°04'N | 144°59'W | 2,3,4,5,7 | a | | | | | | | | |
| 60 | Monument Creek | 45QQ2 | 1900 | 65°03'N | 145°55'W | 2,3,4,5 | a | | | | | | | | |
| 61 | Mt. Ryan | 46QQ1AP | 2950 | 65°16'N | 146°07'W | 2,3,4,5,7 | a | | | | | | | | |
| 62 | Little Chena | 46QQ2AP | 2200 | 65°08'N | 146°32'W | 2,3,4,5,7 | a | | | | | | | | |
| 63 | Colorado Creek | 46PP4S | 750 | 64°52'N | 146°39'W | 1,2,3,4,5,7 | a | | | | | | | | |
| 64 | Cleary Summit | 47QQ1A | 2230 | 65°03'N | 147°24'W | 1,2,3,4,5,7 | a | | | | | | | | |
| 65 | Yak Pasture | 47PP1 | 540 | 64°52'N | 147°55'W | 2,3,4,5 | a | | | | | | | | |
| 66 | Bonanza Creek | 48PP1 | 1150 | 64°45'N | 148°20'W | 2,3,4,5 | b | | | | | | | | |
| 67 | Haystack Mtn. | 47QQ2 | 1950 | 65°08'N | 147°38'W | 2,3,4,5 | d | | | | | | | | |
| 68 | Caribou Creek | 47QQ3 | 1440 | 65°09'N | 147°35'W | 2,3,4,5 | d | | | | | | | | |
| 69 | Poker Creek | 47QQ4S | 1025 | 65°08'N | 147°32'W | 2,3,4,5,7 | d | | | | | | | | |
| 70 | Farewell Lake | 53NN1A | 1090 | 62°34'N | 153°35'W | 3,4 | a | | | | | | | | |
| 71 | Lake Minchumina | 52001A | 730 | 63°53'N | 152°18'W | 3,4 | a | | | | | | | | |
| 72 | Wien Lake | 51PP1A | 1020 | 64°22'N | 151°18'W | 3,4 | a | | | | | | | | |
| 73 | Lake Todatonten | 52RR1a | 980 | 66°10'N | 152°55'W | 3,4 | a | | | | | | | | |
| 74 | Bettles Field | 51RR1A | 640 | 66°35'N | 151°32'W | 3,4 | a | | | | | | | | |
| 75 | Anaktuvuk Pass | 51TT1A | 2100 | 68°09'N | 151°41'W | 3,4 | a | | | | | | | | |

LEGEND

* Numerals 1,2,3,4,5, and 6 refer to January 1, February 1, March 1, April 1, May 1, June 1, and 7 - for special dates.

* Letters refer to Agency that secures the snow survey, as follows:

- a. Soil Conservation Service
- b. Forest Service
- c. U.S. Army Corps of Engineers
- d. U.S. Army Cold Regions Research & Engineering Lab
- e. Alaska Power Administration
- f. Bureau of Land Management
- g. U.S. Geological Survey
- h. University of Alaska
- i. Alaska Pipeline Office

* Letters following the snow course no. refer to:

- * A. Snow course and aerial stadia marker
- * a. Aerial stadia marker only
- M. Soil Moisture Station
- P. Precipitation Storage Cage
- S. Snow Pillow

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
2221 E. NORTHERN LIGHTS BLVD. ROOM 129
ANCHORAGE, ALASKA 99504

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR-101



FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*